

ABSTRACT

Several local IEEE1394 buses are bridged together over a second bus type to create a global bus wherein each local bus node is able to address nodes across the global bus without the local nodes being aware of the bridging operation. A bridging device operates by translating local bus node addresses to a global bus for communication over the second bus type. Alternatively, the local bus node identification process is controlled by the bridging device operating as the root node to cause the local nodes to be identified with a node address that is unique for the global network. The second bus type operates as a backbone for the global network and can be any type of communication bus or network with capability to transport the local bus traffic. The bridging devices that interface the local IEEE1394 buses to the backbone contain portals specific to each bus type that can communicate data between the dissimilar buses.